
Marine Physical Laboratory

Vertical Source Array Experiment

William S. Hodgkiss

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Abstract

Vertical source array hardware was prepared then taken to sea in a shallow water, active surveillance experiment in April 1996.

Research Objectives

The objective of this effort was to prepare for and carry out a vertical source array experiment with joint participation by MPL, NRaD, and the NATO SACLANT Undersea Research Centre.

Research Summary

A shallow water, active surveillance experiment was conducted in the eastern Mediterranean Sea in April 1996. Participants in the experiment included MPL, NRaD, and the NATO SACLANT Undersea Research Centre. These funds provided support for MPL to prepare for and carry out the vertical source array portion of this experiment.

Preparation for the experiment involved several efforts. A 1000 m replacement of the original 600 m umbilical cable was acquired

and integrated into the system. This modification required that new transformers and tuning inductors be specified and ordered to accommodate the characteristics of the longer cable. In addition, the existing, PC-based signal synthesis and system control software was revised for the experiment. Lastly, the entire system was tested, then shipped to the NATO SACLANT Undersea Research Centre (La Spezia, Italy).

Under these funds, two MPL personnel participated in the April 1996 experiment. They helped deploy the source array, operate the system during the experiment, and prepare the hardware for return shipment after the experiment was completed.

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